

*File 98*

# NORTHGATE

E X P L O R A T I O N L I M I T E D



ANNUAL REPORT

F O R T H E Y E A R E N D E D D E C E M B E R 3 1 s t

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Tynagh Mine and Concentrator — County Galway, Ireland

NORTHGATE EXPLORATION LIMITED





# NORTHGATE EXPLORATION LIMITED

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Patrick J. Hughes — President

## PRESIDENT'S REPORT

The year 1966 was one of achievement for your company and its operating subsidiary, Irish Base Metals Limited, during its first year of production. Following the tune-up period in the first quarter, ore treatment rate and concentrate production advanced progressively, approaching optimum levels toward the end of the fourth quarter.

Among the principal highlights of the year were the redemption of \$2,473,983 principal amount of funded debt six months in advance of the mandatory payment date; an appreciable increase in indicated reserves of the secondary oxide ore; and the resumption of broadly-based exploration throughout the company's extensive prospecting licence areas in Ireland.

It can also be recorded that the plant construction program at the Tipperary copper-silver mine of associated Gortdrum Mines Limited is making excellent progress toward scheduled production by mid-1967.

While more detailed statements regarding mine and plant operations are contained in the Directors' Report, I would like briefly to summarize the significant statistics. Mine ore treated during 1966 totalled 545,693 tons, which compares favourably with the forecast made in the third quarterly report of 543,700 tons.

Concentrate production during the year amounted to 121,561 tons containing approximately 84 million pounds of lead, 48 million pounds of zinc, 3.5 million pounds of copper, and 1,218,000 ounces of silver. The estimated gross value of these concentrates was \$15,792,000, and the calculated net smelter returns after deducting shipping, smelting and marketing charges, was \$10,245,000.

Operating profit before depreciation and amortization for 1966 was \$6,437,760. Cash flow, before allowances for depreciation and non-cash write offs, was \$5,539,514 equal to \$1.11 per issued share. To indicate the earnings potential without the effect of debt charges, the resultant cash flow, excluding interest, would be \$6,549,240 or the equivalent of \$1.32 per issued share.



Net consolidated income, after all write offs for depreciation, amortization of preproduction expenditures, debt discount and financing expenses, was \$3,783,000 equal to \$0.76 per issued share.

As stated, \$1,200,000 (Can.) principal amount of Series 'A' Bonds, and \$1,200,000 (U.S.) principal amount Series 'B' Bonds (equivalent to \$2,473,983 in Canadian funds) of Irish Base Metals Limited were redeemed on December 15, 1966. On the redemption of the \$1,200,000 Series 'A' Bonds of Irish Base Metals Limited, an equal principal amount of the 6½ % Collateral Trust Debentures of Northgate Exploration Limited were simultaneously redeemed.

The mandatory date for the redemption of the foregoing portions of the funded debt was May 1, 1967. After allowing for the mandatory sinking



Tynagh Mine and concentrator, tailings disposal in background

fund payments on the Series "A" and Series "B" Bonds of Irish Base Metals Limited, an additional cash flow sinking fund payment of \$2,078,829 is payable on the Series "B" Bonds on May 1st, 1967 as a result of the operations for the year which is reflected in the consolidated balance sheet as a current liability.

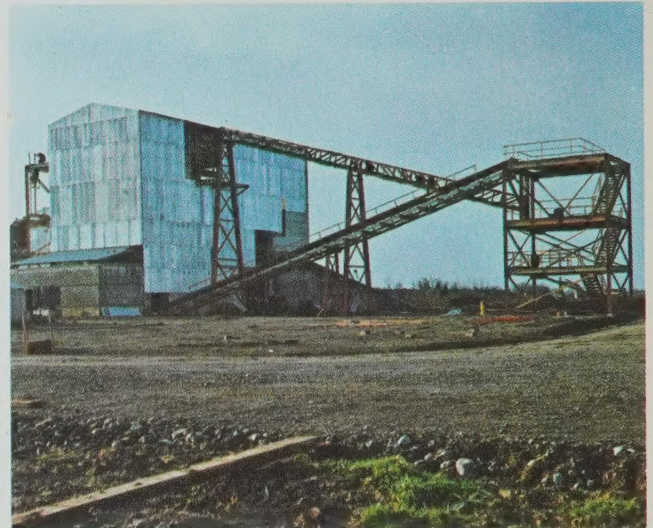
During 1966 there were considerable fluctuations in metal prices, particularly in respect to London Metal Exchange quotations for lead. At the beginning of the year with L.M.E. lead prices considerably above £100 per long ton, metal production during the first quarter was valued at £100 per long ton for lead; £110 per long ton for zinc during January and February, and £102 for March.

There was a significant change in the price of lead on October 10th which required a downward adjustment for some of the concentrate produced prior to September 30th, and this and other adjustments are reflected in the fourth quarter earn-

ings. While the average price for lead for the full 1966 year was £95.1 per long ton, the greatest portion of lead concentrate production was in the second half of the year and the lower prices in the final quarter reduced revenues below earlier expectations. Although a prediction of lead prices for 1967 is difficult to make, we are presently of the opinion that an average of £80 per long ton should be a reasonable figure for the year.

As can be expected in any new ore processing plant treating combined sulphide-oxide ores, certain mechanical adjustments, modifications of equipment, materials handling and metallurgical methods were required. Most of these were made during the year and further steps to improve operating efficiency will be made during the current period.

Considerable experience was gained in the handling and treatment of the complex ores, which was evident in the effective switch-over at mid-year from the treatment of sulphide to oxide ore. It is of interest to note that for the 26 operating days in the month of December, the mill treated an average of 1,940 tons daily, equal to 97% of capacity. In January of this year, on 30 operating days in the month, the average daily treatment rate was 2,060 tons for a total through-



Ore crushing building and transfer tower at Gortdrum Mines (Ireland) Limited

out of 61,869 tons of ore, resulted in concentrate production of 14,729 tons, achieving the highest monthly output to date, well in excess of the previous record of 13,705 tons during the month of November. The gross value of January production was \$2,018,000 and the calculated value of net smelter return was \$1,413,000.

The forecast for 1967 projects the treatment of 523,000 tons of sulphide ore and 177,000 tons of oxide ore, to produce 67,820 tons of lead concentrate, 45,200 tons of zinc concentrate, and 46,300 tons of bulk lead-zinc concentrate.



As a result of knowledge gained through the mining and treatment of volume tonnage and detailed grade control drilling, ore reserves were recalculated and upwardly revised. A reclassification of some of the secondary sulphide ore to secondary oxide ore was made, and as a result of recalculated reserves in the oxide ores, there was a net increase in ore reserves available for open pit recovery equal to approximately 400,000 tons. This addition is equivalent to about six months production.



The significance of this increase in reserves could also be expressed in terms of the potential net smelter value, which if based on the average net smelter return for the fourth quarter, would represent an amount of approximately \$6.5 million.

At the year end, approximately 250 persons were directly employed at the mine, plant, transport and storage facilities. To demonstrate the importance of the Tynagh Mine operation on the local and national economy of the Republic of Ireland, it is interesting to note that the total of wages, salaries, supplies and services including utilities, paid during 1966, amounted to approximately \$3,150,000, and the provision for royalty payments to the Government for this period was \$420,000, or a total in excess of \$3.5 million.

This is a commendable performance for a mine in its first year of operation considering the initial operating difficulties which were encoun-



Open pit at Tynagh Mine,  
concentrator and service buildings upper right

tered. A further improvement is anticipated during the current year, reflecting increased ore treatment and concentrate production, together with reduced interest charges as a result of further redemptions of funded debt. While it is not possible to make any accurate forecasts of cash flow from 1967 operations due to a fluctuation of metal prices and other contingencies, it is a reasonable expectation that all or a substantial portion of the remaining funded debt could be retired during this year or early in 1968.

On behalf of the Board, I again wish to express appreciation for the effective planning and direction by management, technical and office staff, and to thank all employees for their loyalty and efforts to increase the efficiency of operations.

*Pat. J. Hughes.*

President

February 1, 1967.



## DIRECTORS' REPORT

### Production

During 1966, the plant treated 301,756 tons of secondary sulphide ore, and 243,937 tons of secondary oxide ore, for a total of 545,693 tons. Total concentrate output for the year was 121,564 tons, consisting of 64,514 tons of lead concentrate; 26,393 tons of zinc concentrate; and 30,630 tons of lead-zinc bulk concentrate.

The approximate metals contained in the concentrates were 84,154,000 pounds of lead; 48,015,000 pounds of zinc; 3,485,000 pounds of copper; and 1,218,000 ounces of silver. The estimated gross value of these concentrates was \$15,792,000 and the calculated value of net smelter returns, after deducting shipping, smelting and marketing charges, was \$10,245,000.

Although mechanical difficulties hampered sustained operations at the rated capacity of 2,000 tons, the daily average treatment rate improved significantly during the second half of the year. On the basis of the 26 operating days in December, during which a total of 50,448 tons of ore were treated, the daily average was 1,940 tons equal to 97% of capacity. Concentrate output for December amounted to 12,428 tons.

There was a further improvement in the month of January, 1967, with a total of 61,869 tons of ore treated for a daily average on the 30 operating days, of 2,060 tons. Concentrate output of 14,729 tons was the highest monthly average since the commencement of operations. The estimated gross value of concentrate produced in this month is \$2,018,000, and the calculated value of net smelter return is \$1,413,000.

A summary of 1966 operations shows that results were close to objectives as revised in accordance with quarterly operating experience. It was noted in last year's Annual Report that the delay in the commencement of operations necessitated a revision of the planned rate of ore treatment from the previous forecast of 650,000 tons in 1966, to 565,000 tons. This was again revised, as stated in the Third Quarter Report, with a reduction in the projected tonnage for the final quarter from 180,000 tons to 157,700 tons, or a total of 543,700 tons compared with the actual 545,693 tons treated.

It should also be noted that the first quarter of 1966 was a tune-up period. The table below shows the production statistics for the individual quarterly periods:

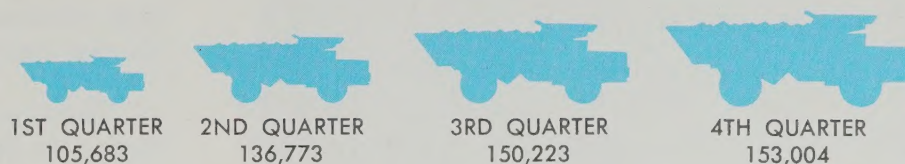
The plant treated sulphide ore until early August when a switch-over was made to oxide ore, the latter being the sole ore treated during the remainder of the year. Considerable experience was gained in the materials handling and metallurgical characteristics of the oxide ore as a result of this switch-over, and it is felt that a change from sulphide to oxide ore can now be accomplished with less difficulty.

It is planned to continue the treatment of oxide ore for the first month of 1967, after which time a changeover will be made to sulphide ore in order to meet smelter delivery requirements. During 1967 present forecasts call for the treatment of a total of 523,000 tons of sulphide ore, and 177,000 tons of oxide ore. The estimated production from this projected ore treatment schedule for 1967 is 67,820 tons of lead concentrate; 45,200 tons of zinc concentrate; and 46,300 tons of lead-zinc bulk concentrate.

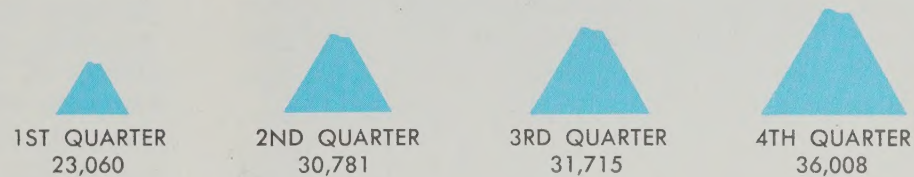
|                              | 1966             |                   |                  |                   |
|------------------------------|------------------|-------------------|------------------|-------------------|
|                              | First<br>Quarter | Second<br>Quarter | Third<br>Quarter | Fourth<br>Quarter |
| Tons of Ore Treated          | 105,683          | 136,773           | 150,233          | 153,004           |
| Tons of Concentrate Produced |                  |                   |                  |                   |
| Lead                         | 4,589            | 7,183             | 21,152           | 31,617            |
| Zinc                         | 8,223            | 13,372            | 4,798            | nil               |
| Bulk                         | 10,248           | 10,226            | 5,765            | 4,391             |
| Totals                       | 23,060           | 30,781            | 31,715           | 36,008            |



## TONS OF ORE TREATED



## TONS OF CONCENTRATE PRODUCED



## CONTAINED METALS

|        |                 |
|--------|-----------------|
| LEAD   | 84,154,000 LBS. |
| ZINC   | 48,015,000 LBS. |
| COPPER | 3,485,000 LBS.  |
| SILVER | 1,218,000 OZS.  |



## Ore Grade and Recoveries

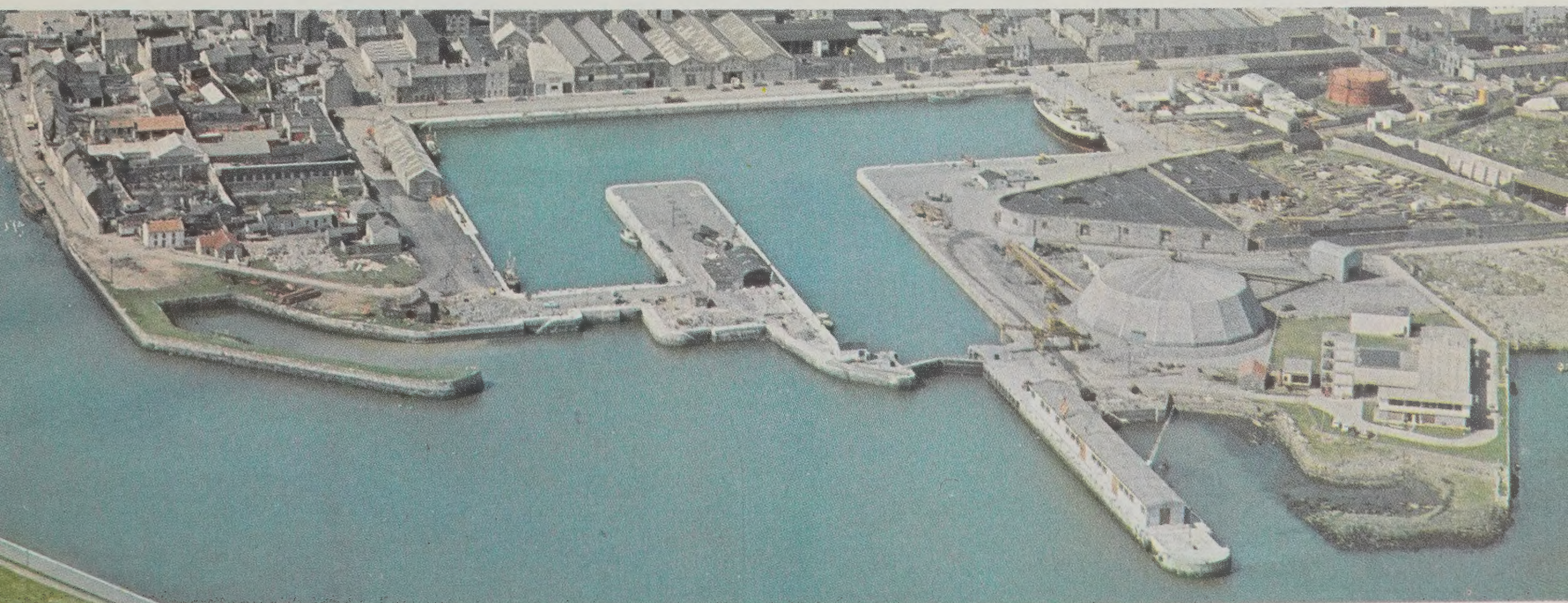
The average grade for the 301,756 tons of sulphide ore treated during 1966 was 7.28% lead; 10.06% zinc; and 3.12 ounces silver per ton. The overall recovery of lead was 72.1%; zinc 67.4%; and silver 45.8%. Concentrate output was 67,047 tons.

The average grade for the 243,937 tons of oxide

ore treated during the second half of 1966 was 13.68% lead; 2.26% zinc; 1.0% copper; and 4.43 ounces silver per ton. The overall recovery of lead was 76.5%; copper 56%; and silver 65.2%. Concentrate output was 54,517 tons.

The proportions of total concentrate production were 53.1% lead; 21.7% zinc; and 25.2% lead-zinc bulk.

Port of Galway, Ireland — Shiploader and circular concentrate storage building of Irish Base Metals Limited at lower right





### Operating Profit

On the basis of the projected annual treatment of 700,000 tons of ore, operations for the year were approximately 78% of capacity. Operating profit totalled \$6,437,760 and the resultant cash flow before allowance for depreciation, interest, and non-cash write offs, was \$5,539,514 equal to \$1.11 per issued share.

Direct operating costs per ton of ore treated during the year averaged \$5.29. A reduction in operating costs can be expected with the treatment of larger tonnages and resultant improved operating efficiency. In the fourth quarter of 1966, the mine operating costs per ton of ore treated were \$5.09.

### Net Earnings

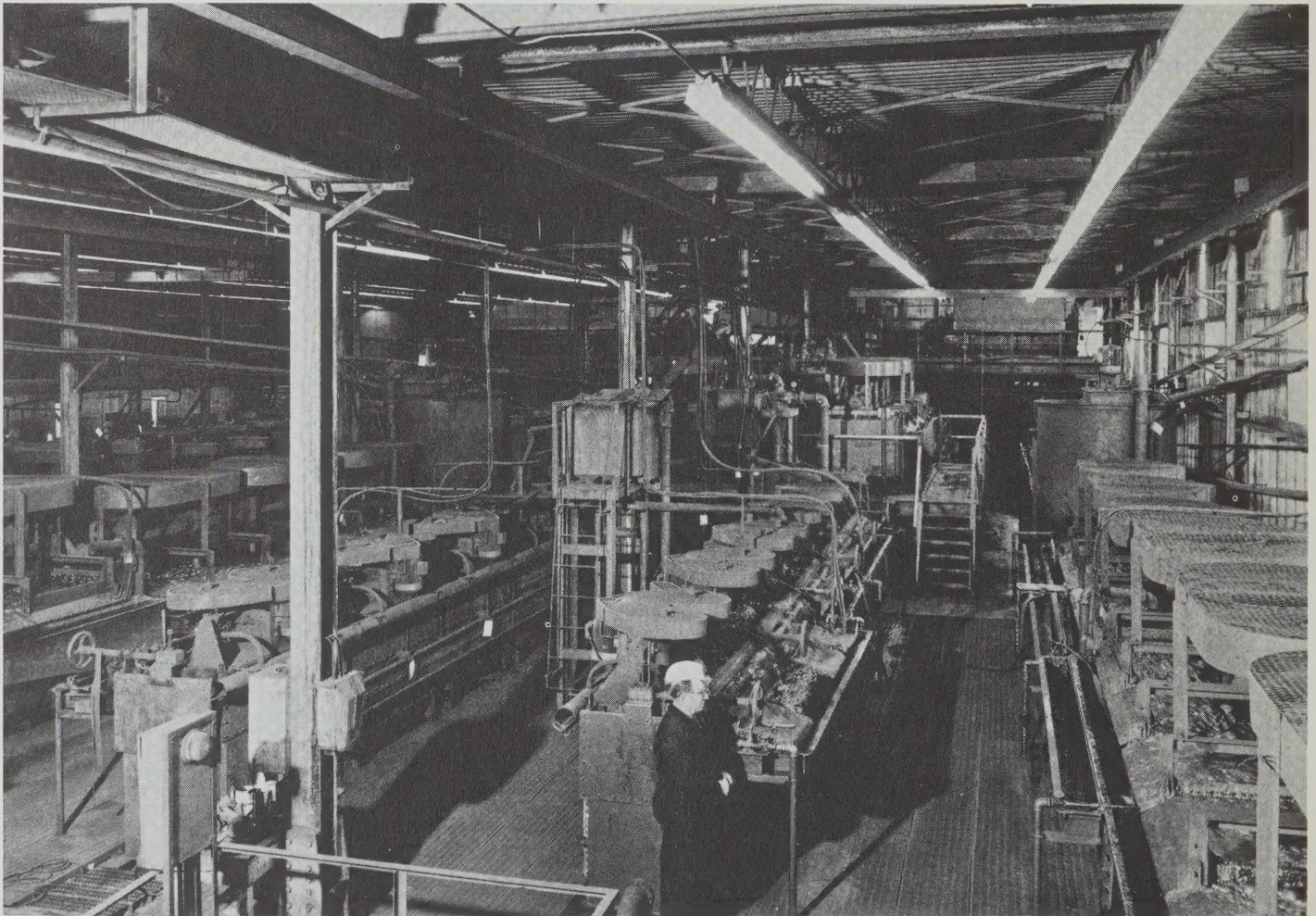
Net earnings for the year were \$3,783,013 equal to \$0.76 per issued share. This is after all write offs, amortization of pre-production expenditures,

debt discount and financing expenses, and interest charges totalling \$1,009,726.

There was a significant change in metal prices during the final quarter of the year, particularly with respect to the price of lead. London Metal Exchange quotations during this period varied from a monthly average of £80.9 to £84.9 per long ton, which compares with a level during the first quarter of well above £100 per long ton and the average for the year of £95.1 per ton. Partially offsetting this was an increase in the price of copper for which smelter settlements are based on London Metal Exchange quotations.

Since a considerable portion of lead production came in the second half, it was necessary to make certain adjustments in estimated smelter receipts in keeping with prices prevailing at the year end. As final settlement dates for some of the concentrate production occur during the first quarter of 1967, smelter receipts will be adjusted accordingly. A reasonable estimate of the average price of lead for 1967 is £80 per long ton.

Portion of flotation section in mill building





## Ore Reserves

Detailed grade control drilling in the oxide section of the open pit, combined with growing experience in both the mining and milling of secondary ore, has resulted in a re-classification and net increase in the tonnage of this material. The revised ore estimates are shown in the accompanying table.

The net result of the revisions of ore estimates is that the oxide reserves were increased by 679,837 tons and the sulphide ore reserves were decreased by 283,477 tons. The additional ore arising from these revised estimates is equal to approximately a half years' mill production.



Tynagh Mine open pit

## ORE RESERVES — OPEN PIT

| 1966      | Ag   | Pb   | Zn   | Cu  |                    | 1965      | Ag   | Pb   | Zn   | Cu   |
|-----------|------|------|------|-----|--------------------|-----------|------|------|------|------|
| Tons      | oz.  | %    | %    | %   |                    | Tons      | oz.  | %    | %    | %    |
| 2,139,900 | 3.2  | 9.2  | 7.8  | 0.3 | Secondary Sulphide | 2,724,133 | 2.93 | 8.66 | 7.36 | 0.23 |
| 1,635,900 | 3.8  | 8.4  | 6.3  | 0.9 | Secondary Oxide    | 1,200,000 | 3.69 | 9.92 | 4.66 | 1.32 |
| 900,000   | 2.04 | 4.76 | 4.27 | 0.6 | Primary Sulphide   | 900,000   | 2.04 | 4.76 | 4.27 | 0.6  |
| 4,675,800 |      |      |      |     |                    | 4,824,133 |      |      |      |      |

## ORE RESERVES — UNDERGROUND (Primary Sulphide)

| 1966      | Ag   | Pb   | Zn   | Cu  |
|-----------|------|------|------|-----|
| Tons      | oz.  | %    | %    | %   |
| 2,860,000 | 2.04 | 4.76 | 4.27 | 0.6 |

## TOTAL ORE RESERVES

December 31, 1966      December 31, 1965  
7,535,800 TONS      7,684,133 TONS

### LEGEND

Ag — Silver  
Pb — Lead  
Zn — Zinc  
Cu — Copper



## Funded Debt

The mandatory payments due on May 1st, 1967, consisting of \$1,200,000 principal amount (Canadian funds) on the outstanding Series 'A' Bonds, and \$1,200,000 principal amount (U.S. funds) on the outstanding Series 'B' Bonds, were pre-paid on December 15, 1966. As a result of the redemption of the \$1,200,000 of Series 'A' Bonds of Irish Base Metals Limited, an equal principal amount of the 6½% Collateral Trust Debentures of Northgate Exploration Limited were redeemed on December 15, 1966.

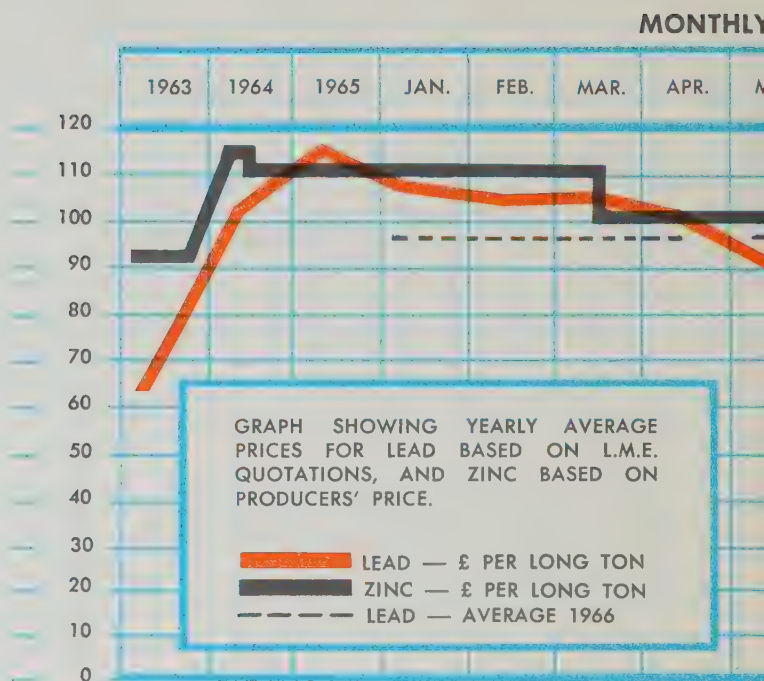
The net effect of these redemptions is a reduction in the total funded debt equal to \$2,473,983. This will produce an appreciable reduction in interest charges during the current year. An additional cash flow sinking fund payment of \$2,078,829 is payable May 1, 1967. Owing to the leverage effect of fluctuating metal prices, it is difficult to forecast the cash available for further debt retirement during the coming year. On the basis of present production schedules and forecasts for metal prices, it is expected that a further and substantial reduction in funded debt will be made during 1967.

If metal prices, particularly those for lead, improve from current levels, it is possible that cash flow generated from operations during 1967 would be adequate to enable the retirement of the remaining long term debt.

## Gortdrum Mines Limited

Your company is a substantial shareholder (in excess of 700,000 shares) in Gortdrum Mines Limited which is scheduled to commence production in mid-1967. Construction of the \$5.6 million concentrator and related facilities at the copper-silver mine of Gortdrum Mines Limited near Tipperary, Ireland, is making excellent progress, as evident in the photographs reproduced in this Report.

The Gortdrum Mines' concentrator will have a rated capacity of 1,500 tons daily and a 10-year contract has been arranged for the sale of the concentrate output to a European smelter. The present prices for copper reflect favourably on the projections of earnings and cash flow, as prepared by Messrs. James, Buffam & Cooper. The approximate sum available for debt retirement of Gortdrum Mines (Ireland) Limited for the eight year period





GE 1966



ended August 31, 1975, is estimated at \$19.5 million on the basis of a price of 45¢ (U.S.) per lb. for copper and \$1.39 (Canadian) per oz. for silver; and \$25.5 million with copper at 55¢ (U.S.) per lb. and silver at \$1.39 (Canadian) per oz.

### Exploration

**Ireland** — The company, through its wholly owned subsidiary, Irish Base Metals Limited, previously held prospecting licences covering a total area of approximately 225 square miles predominantly in Counties Clare and Galway, as well as interests varying from 25% to 50% in other prospecting licences jointly held with associated companies covering a further area of 100 square miles. These holdings were further expanded during the year as a result of additional prospecting licences being granted in Counties Roscommon, Galway and Mayo.

As stated in the 1966 Annual Report, the availability of funds from mining operations has enabled the resumption of exploration work which had previously been curtailed under the terms of the financing arrangements. This was implemented during 1966 by the company's wholly owned subsidiary, Irish Base Metals Limited, with the organization of an exploration division, including the establishment in June of a separate exploration office at Long Point, Loughrea, County Galway.

The exploration office contains a geochemistry laboratory which has now been equipped with an Atomic Absorption Spectrophotometer for determination of individual metals content of soil samples. At the peak periods up to 10,000 samples per month have been analyzed at the laboratory. A staff of six is now employed at the exploration office, and the field crew, which has been supplemented at times with extra temporary staff, currently consists of two geologists and three field men.

While considerable effort during the year was devoted to acquiring technical personnel and the organization of the exploration division, appreciable geological mapping, geochemical and geophysical surveying, was carried out on several licence areas, including diamond drilling on some of the licences. Particular emphasis is being directed toward the further exploration of the company's extensive holdings adjacent to the Tynagh Mine property which cover approximately nine miles of the North Tynagh Fault.





Looking east across the Tynagh Mine open pit, tailings disposal upper left

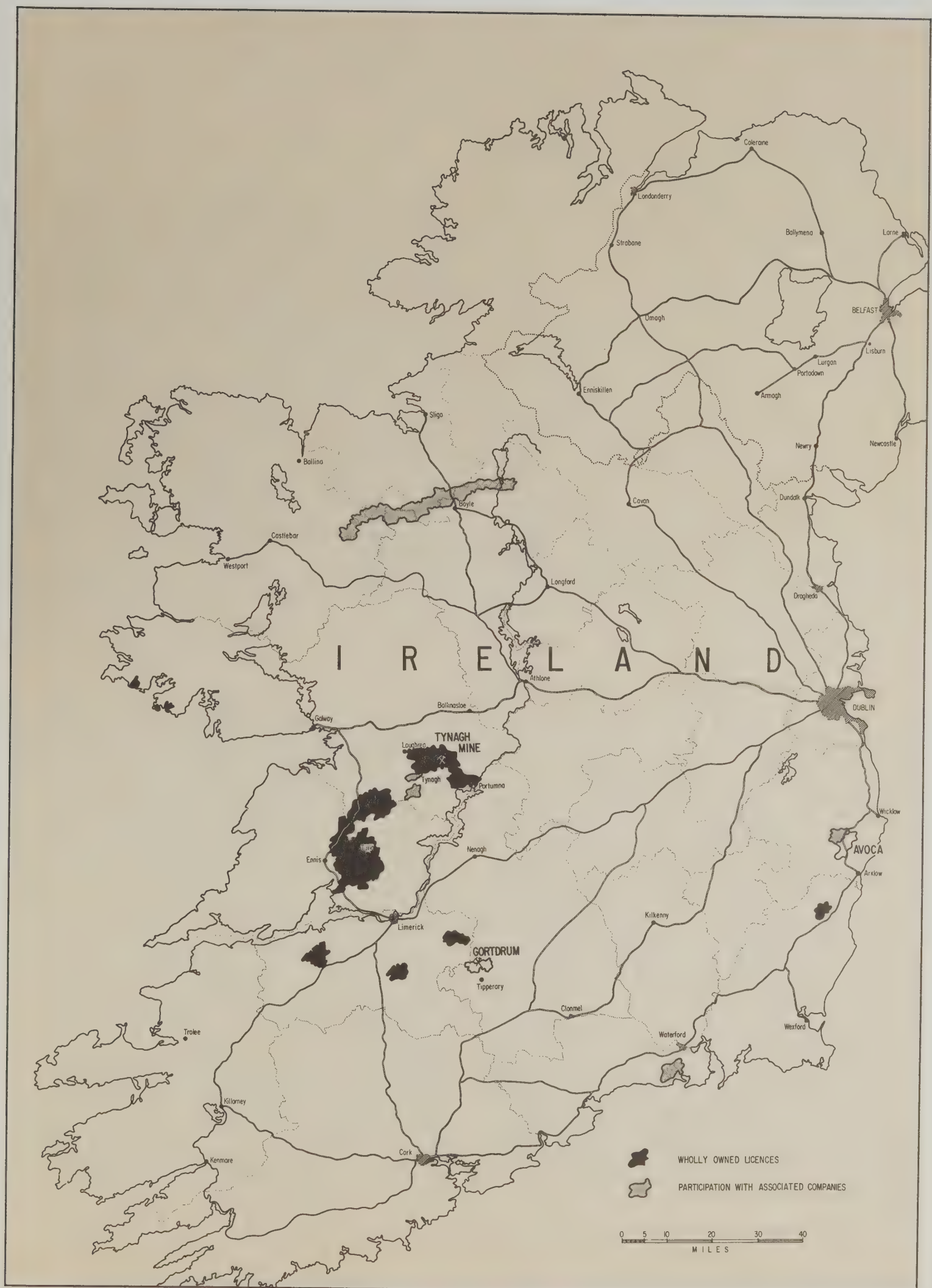
The bulk of the detailed exploration carried out on the Tynagh Mine property and contiguous licences, which includes a current diamond drilling program directed toward a test of the strike extensions to the east and west as well as below the presently defined ore zones, is, in effect, a continuation of the work done in 1962-3. At that time, sufficient ore reserves had been indicated for some 11 years of operation and there was no immediate incentive for continued exploration. The North Tynagh fault and associated branch fractures, and particularly the area adjacent to the orebody laterally along strike and below, is considered a most promising exploration target.

The program in this target area which has only recently commenced, will consist of systematic grid-drilling at an estimated cost of \$50,000, which may be expanded according to results.

**Canada** — The company is participating to the extent of 25% of the exploration costs in a program designated 'Project Circle' to explore base metal possibilities in a favourable greenstone belt north of Great Slave Lake, Northwest Territories. This program is being conducted by an associated company, Anglo United Development Corporation Limited. Following preliminary reconnaissance geophysical surveying, several claim blocks were staked along a 40-mile belt.

Subsequent geophysical surveys, geological mapping and prospecting resulted in additional staking expanding the holdings in the area to a total of 382 claims. Work completed to the end of the 1966 season outlined nine promising conductors in the Hart-Rivett Lakes sector with surface trenching on one zone in particular, revealing copper-nickel mineralization. Encouraging copper-nickel values were







obtained in the 11 drill holes which were completed prior to freeze-up on one conductor testing a strike length of 1,250 feet. The tier of holes tested a relatively shallow horizon with the southern-most 600 feet of strike length showing an average width of 16.0 feet grading 0.39% copper and 0.54% nickel indicating approximately 1,250 tons per vertical foot.

An attempt was made to drill a second tier of holes at a deeper horizon, however, only three holes were completed when extreme weather conditions made it impractical to continue operations during the winter. It is planned to continue this program during the more favourable working conditions in the spring.

### General

The forecast of operations for 1967 is for the treatment of 700,000 tons of ore operating the plant at rated capacity. Experience gained in the varying metallurgical and handling techniques is reflected in the progressively improving results evident in the record ore treatment rate and concentrate output achieved in January of 1967. This can be expected to have a beneficial effect on earnings during the current year.

As noted in the President's Report, the Tynagh Mine is providing direct employment for approximately 250 persons, and the combined expenditures for wages, salaries, services and supplies in Ireland totalled in excess of \$3 million during 1966. In addition, the provision for royalty payments to the Government of Ireland for this period amounted to \$420,000.

Your Board of Directors are of the view that 1967 will be a year of further achievement.

Respectfully submitted by the

BOARD OF DIRECTORS

February 1 1967



☾ SILVER

♀ COPPER

⚡ LEAD

Z ZINC



## GORTDRUM MINES (IRELAND) LIMITED

Scenes at the mine site near Tipperary, Ireland, showing construction of \$5.2 million concentrator complex scheduled to commence production mid-1967



3.5 yard diesel power shovel and 35 ton capacity truck in the open pit



Concentrator complex — mill building upper centre with crushing plant to the right



Mill building left centre, crushing plant to the right



Looking south across the mine open pit, plant buildings at top



# CONSOLIDATED BALANCE SHEET AS AT DECEMBER 31, 1966

(With comparative figures at December 31, 1965)

## ASSETS

### CURRENT ASSETS

Cash  
Short term securities at cost  
Smelter settlements outstanding at estimated net realizable value  
Concentrates on hand at estimated net realizable value (note 2)  
Accounts receivable  
Prepaid expenses

### FUNDS HELD BY TRUSTEES (note 3)

Cash and short term securities at cost

### SHARES IN AND ADVANCES TO OTHER COMPANIES

Shares in Gortdrum Mines Limited at cost  
(quoted market value of free shares 1966, \$810,674; 1965, \$440,012)  
Other shares, advances and participations at cost less amounts written off

### FIXED ASSETS

Buildings, machinery and equipment at cost  
Land in Ireland at cost  
Mining claims in Canada at nominal value

Less accumulated depreciation (note 8)

### OTHER ASSETS AND DEFERRED CHARGES

Supplies at cost  
Preproduction expenditures less amortization (note 8)  
Excess of cost of shares in subsidiary company over book value of underlying assets at date of acquisition  
Debt discount and expenses, less amortization  
Exploration expenditures in Canada and Ireland deferred  
Other deferred charges

## LIABILITIES

### CURRENT LIABILITIES

Bank loan (partly secured by shares in other companies)  
Accounts payable and accrued liabilities  
Notes payable on equipment purchases, due within one year  
Government royalty payable  
Accrued interest on debentures and bonds, including Irish income tax on bond interest  
Bond principal amount payable within 12 months

### LONG TERM DEBT (note 4)

6½ % Collateral trust debentures, due May 1, 1971  
6¼ % First mortgage sinking fund bonds, series B, issued by subsidiary company, due May 1, 1971  
(1966 U.S.\$4,800,000; 1965 U.S.\$6,000,000)

Less amount included with current liabilities

Notes payable on equipment purchases, less amount included with current liabilities

### SHAREHOLDERS' EQUITY

Capital stock (note 7)  
Authorized — 6,000,000 shares of \$1 each  
Issued — 4,979,200 shares  
Contributed surplus (premium less discount on shares)  
Retained earnings (deficit)



# NORTHGATE EXPLORATION LIMITED

(Incorporated under the laws of Ontario)

AND ITS WHOLLY OWNED SUBSIDIARY COMPANY  
IRISH BASE METALS LIMITED

| 1966      | 1965         |
|-----------|--------------|
| 197,720   | \$ 107,866   |
| 1,881,720 | 402,447      |
| 1,353,027 |              |
| 776,619   | 695,820      |
| 106,472   | 86,927       |
| 34,817    | 32,388       |
| 4,350,375 | 1,325,448    |
| 104,333   | 723,233      |
| 570,955   | 518,602      |
| 97,383    | 42,025       |
| 668,338   | 560,627      |
| 8,949,851 | 8,436,631    |
| 232,748   | 232,748      |
| 1         | 1            |
| 9,182,600 | 8,669,380    |
| 1,041,198 | 120,000      |
| 8,141,402 | 8,549,380    |
| 525,933   | 225,150      |
| 4,646,162 | 5,187,756    |
| 983,326   | 983,326      |
| 246,868   | 494,954      |
| 110,582   |              |
| 69,026    | 27,796       |
| 6,581,897 | 6,918,982    |
| 9,846,345 | \$18,077,670 |
| 560,000   | \$ 500,000   |
| 427,392   | 655,801      |
| 81,159    | 96,489       |
| 405,000   |              |
| 387,000   | 65,000       |
| 2,078,829 |              |
| 3,939,380 | 1,317,290    |
| 4,800,000 | 6,000,000    |
| 5,164,014 | 6,437,997    |
| 9,964,014 | 12,437,997   |
| 2,078,829 |              |
| 7,885,185 | 12,437,997   |
|           | 83,616       |
| 7,885,185 | 12,521,613   |
| 4,979,200 | 4,979,200    |
| 166,951   | 166,951      |
| 2,875,629 | (907,384)    |
| 8,021,780 | 4,238,767    |
| 9,846,345 | \$18,077,670 |

## AUDITORS' REPORT

To the Shareholders of  
NORTHGATE EXPLORATION LIMITED:

We have examined the consolidated balance sheet of Northgate Exploration Limited and its subsidiary company, Irish Base Metals Limited, as at December 31, 1966 and the consolidated statements of income, retained earnings and source and application of funds for the year then ended. Our examination of the financial statements of Northgate Exploration Limited (the parent company) included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances. With respect to the subsidiary company, Irish Base Metals Limited, of which we are not the auditors, we have carried out such enquiries and examinations as we considered necessary in order to accept for purposes of consolidation the report of its auditors.

In our opinion these consolidated financial statements present fairly the financial position of the companies as at December 31, 1966 and the results of their operations and the source and application of their funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

GUNN, ROBERTS AND CO.,  
Chartered Accountants.

Toronto, Canada  
February 1, 1967

Approved on behalf of the Board:

R. E. FASKEN, Director.

G. T. SMITH, Director.



## CONSOLIDATED STATEMENT OF INCOME

— For the year ended December 31, 1966

### REVENUE

|                                                        |  |                   |
|--------------------------------------------------------|--|-------------------|
| Metal recovery, gross value .....                      |  | \$15,792,120      |
| Deduct shipping, smelting and marketing expenses ..... |  | 5,547,300         |
|                                                        |  | <u>10,244,820</u> |

### OPERATING EXPENSES

|                                                             |             |                  |
|-------------------------------------------------------------|-------------|------------------|
| Operating expenses other than items set out below .....     | \$2,888,895 |                  |
| Administrative and general expenses .....                   | 498,165     |                  |
| Government royalty .....                                    | 420,000     | 3,807,060        |
| Operating income before depreciation and amortization ..... |             | <u>6,437,760</u> |

### DEDUCT

|                                                           |         |                  |
|-----------------------------------------------------------|---------|------------------|
| Depreciation (note 8) .....                               | 967,415 |                  |
| Amortization of preproduction expenditures (note 8) ..... | 541,594 | 1,509,009        |
|                                                           |         | <u>4,928,751</u> |

### FINANCIAL EXPENSES

|                                                                              |           |           |
|------------------------------------------------------------------------------|-----------|-----------|
| Interest on bonds and debentures and Irish income tax on bond interest ..... | 1,009,726 |           |
| Amortization of debt discount and expenses .....                             | 247,492   |           |
| Loss on sale of investments .....                                            | 18,231    | 1,275,449 |

|                           |  |                |
|---------------------------|--|----------------|
| Add interest earned ..... |  | 3,653,302      |
|                           |  | <u>129,711</u> |

|                                        |  |                     |
|----------------------------------------|--|---------------------|
| NET INCOME for the year (note 9) ..... |  | <u>\$ 3,783,013</u> |
|----------------------------------------|--|---------------------|

## CONSOLIDATED STATEMENT OF RETAINED EARNINGS

— For the year ended December 31, 1966

|                                           |                    |
|-------------------------------------------|--------------------|
| Net income for the year .....             | \$3,783,013        |
| Deduct deficit January 1, 1966 .....      | 907,384            |
| Retained earnings December 31, 1966 ..... | <u>\$2,875,629</u> |

## CONSOLIDATED STATEMENT OF SOURCE AND APPLICATION OF FUNDS

— For the year ended December 31, 1966

### SOURCE OF FUNDS

|                                                  |            |                  |
|--------------------------------------------------|------------|------------------|
| Net income for the year .....                    |            | \$3,783,013      |
| Add charges to income not requiring cash outlay: |            |                  |
| Depreciation .....                               | \$ 967,415 |                  |
| Amortization of preproduction expenditures ..... | 541,594    |                  |
| Amortization of debt discount and expenses ..... | 247,492    | 1,756,501        |
|                                                  |            | <u>5,539,514</u> |

### APPLICATION OF FUNDS

|                                                                |           |                   |
|----------------------------------------------------------------|-----------|-------------------|
| Additions to buildings, machinery and equipment .....          | 543,679   |                   |
| Reduction in non-current portion of long term debt .....       | 4,636,428 |                   |
| Increase in supplies inventory .....                           | 300,783   |                   |
| Exploration expenditures in Canada and Ireland deferred .....  | 110,582   |                   |
| Purchase of shares in other mining companies, less sales ..... | 107,711   |                   |
| Other applications .....                                       | 56,394    | 5,755,577         |
| DECREASE IN FUNDS HELD .....                                   |           | <u>\$ 216,063</u> |

Funds held consist of current assets and funds held by trustees, less current liabilities.



## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — December 31, 1966

### 1. CURRENCY CONVERSION

Current assets and current liabilities of the Irish subsidiary company are converted to Canadian dollars at the rate of exchange prevailing at December 31, 1966. Other assets and deferred charges are converted at rates prevailing when funds for the expenditures were provided. Long term debt is converted at rates prevailing when the debt was incurred.

### 2. SALE OF CONCENTRATES AND METAL PRICES

The Irish subsidiary company has entered into agreements for the sale of the concentrates produced from the Tynagh Mine in the first five years of production.

In computing the estimated net realizable value of concentrates on hand, metal prices have been used as follows:

|        |   |                                                  |
|--------|---|--------------------------------------------------|
| Lead   | — | £ 81 per 2,240 lbs.<br>(Cdn. \$ .108 per lb.)    |
| Zinc   | — | £ 102 per 2,240 lbs.<br>(Cdn. \$ .137 per lb.)   |
| Copper | — | £ 434 per 2,240 lbs.<br>(Cdn. \$ .581 per lb.)   |
| Silver | — | U.S.\$1.31 per ounce<br>(Cdn. \$1.408 per ounce) |

### 3. FUNDS HELD BY TRUSTEES

Funds held in trust are to be applied in redemption of the Series B bonds of Irish Base Metals Limited.

### 4. LONG TERM DEBT

The 6½% collateral trust debentures are secured in part by an equivalent principal amount of the Irish subsidiary company's 6½% first mortgage sinking fund bonds, Series A. Sinking fund provisions of the Series A and Series B bonds issued by the Irish subsidiary company require a mandatory payment in each of the years 1968 to 1970 of \$1,200,000 on the Series A bonds and 20% of the amount of Series B bonds issued. In addition, further amounts are payable based on production and cash flow. The monies received on retirement of the Series A bonds owned by Northgate Exploration Limited are to be applied to the retirement of an equivalent principal amount of the parent company's collateral trust debentures.

### 5. GUARANTEE

The company and its subsidiary company have guaranteed the payment of principal and interest on a maximum amount of U.S.\$6,500,000 Mortgage Bonds of Gortdrum Mines (Ireland) Limited of which U.S.\$2,000,000 had been issued at December 31, 1966.

### 6. CONTINGENT LIABILITIES

Actions have been instituted against the companies as follows:

(a) by three former employees claiming a finders fee equal to 15% of the value of the properties for the location of the Tynagh property in Ireland; and

(b) by a stripping contractor claiming \$150,000 for services and for damages.

The companies have denied any liability in these matters except for an amount of \$17,000 in respect of the claim by the stripping contractor which has been paid. In addition, the subsidiary company may be liable for damages alleged to have been caused to certain lands adjoining the Tynagh mine property.

### 7. CAPITAL STOCK

By Supplementary Letters Patent issued in 1966, the company's authorized capital was increased from 5,000,000 to 6,000,000 shares of \$1 each. At December 31, 1966, there were 10,000 shares under option to an employee at \$4 per share, expiring in 1968.

### 8. DEPRECIATION AND AMORTIZATION

Depreciation of fixed assets has been recorded at the rates set out below bearing in mind the expected useful life of the assets and the life of the estimated ore reserves.

|                                          |                   |
|------------------------------------------|-------------------|
| Crusher plant                            | — 1/6 per annum   |
| Mobile equipment                         | — ¼ per annum     |
| Employees' housing in Loughrea           | — nil             |
| Other buildings, machinery and equipment | — 1/11 per annum. |

Preproduction expenditures are being amortized over the estimated life of the open pit mine.

### 9. INCOME TAXES

No provision for Irish income taxes is required as income from the subsidiary company's mine at Tynagh is exempt from tax for four years from the date of commencement of production. There is no withholding tax payable to the Irish government on dividends paid to Northgate Exploration Limited by the subsidiary company.

### 10. RE-CLASSIFICATION OF PRIOR YEAR

#### EXPENDITURES

Preproduction expenditures deferred at December 31, 1965 have been adjusted in 1966 as follows:

|                                                                                        |                    |
|----------------------------------------------------------------------------------------|--------------------|
| Exploration, development and administrative expenditures deferred at December 31, 1965 | \$4,814,715        |
| ADD:                                                                                   |                    |
| Mine site improvement costs transferred from buildings, machinery and equipment        | 253,041            |
| Depreciation of pit equipment used for mine development                                | 120,000            |
| Adjusted balance at December 31, 1965                                                  | 5,187,756          |
| Deduct amortization                                                                    | 541,594            |
| Balance of preproduction expenditures deferred at December 31, 1966                    | <u>\$4,646,162</u> |

The 1965 balance sheet figures have been adjusted to conform with the 1966 classifications.



# IRISH BASE METALS LIMITED

## BOARD OF DIRECTORS

|                  |                                                                      |
|------------------|----------------------------------------------------------------------|
| G. W. ARMSTRONG  | Northgate Exploration Limited, Toronto, Canada                       |
| W. CASPER        | Metallgesellschaft A.G., Frankfurt, Germany                          |
| A. DE JAER       | Societe Generale des Minerais S.A., Brussels, Belgium                |
| DR. D. R. DERRY  | Duncan R. Derry Limited, Toronto, Canada                             |
| R. E. FASKEN     | Northgate Exploration Limited, Toronto, Canada                       |
| M. GILROY        | Northgate Exploration Limited, Toronto, Canada                       |
| P. J. HUGHES     | Northgate Exploration Limited, Toronto, Canada                       |
| DR. W. F. JAMES  | James, Buffam & Cooper, Toronto, Canada                              |
| J. K. McCAUSLAND | Wood Gundy Securities Limited,<br>Toronto, Canada                    |
| J. V. McPARLAND  | Tara Exploration & Development Co. Ltd.,<br>Dublin, Ireland          |
| G. T. SMITH      | Northgate Exploration Limited, Toronto, Canada                       |
| M. TREBUCQ       | Societe Miniere et Metallurgique de Penarroya S.A.,<br>Paris, France |
| G. H. WHITE      | The British Metal Corporation Limited,<br>London, England            |
| H. S. WHITE      | The Toronto-Dominion Bank, London, England                           |
| G. M. WILSON     | Equitable Securities Canada Limited, Toronto, Canada                 |

## SUBSTITUTE DIRECTORS

|                     |                                                           |
|---------------------|-----------------------------------------------------------|
| DR. B. S. W. BUFFAM | James, Buffam & Cooper, Toronto, Canada                   |
| P. HARRINGTON       | Dublin, Ireland                                           |
| W. HORSTER          | Metallgesellschaft A.G., Frankfurt, Germany               |
| P. J. LENIHAN       | Athlone, Ireland                                          |
| MICHAEL MCCARTHY    | Ballinasloe, Ireland                                      |
| M. V. O'BRIEN       | Dublin, Ireland                                           |
| M. K. PICKARD       | Loughrea, Ireland                                         |
| A. M. R. SYLVESTER  | The British Metal Corporation Limited,<br>London, England |

## OFFICERS

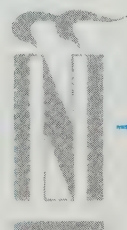
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|-------------------|-----------------------|
| PATRICK J. HUGHES | Chairman of the Board |
| S. P. BOLAND      | Secretary             |
| MURRAY K. PICKARD | General Manager       |

## REGISTERED OFFICE

162 Clontarf Road, Dublin 3, Ireland

## MINE OFFICE

Tynagh, County Galway, Ireland









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*See p. 95*

# NORTHGATE

EXPLORATION LIMITED

AR17

SUMMARY REPORT OF PROCEEDINGS  
ANNUAL AND GENERAL MEETING  
TORONTO, CANADA, JUNE 28, 1966







## NORTHGATE EXPLORATION LIMITED—1966

### OFFICERS

#### *President*

PATRICK J. HUGHES

#### *Executive Vice-President*

ROBERT E. FASKEN

#### *Vice-President*

MATTHEW GILROY

#### *Secretary*

G. WARREN ARMSTRONG

#### *General Manager*

MURRAY K. PICKARD

### DIRECTORS

G. WARREN ARMSTRONG

DR. DUNCAN R. DERRY

\*ROBERT E. FASKEN

MATTHEW GILROY

PATRICK J. HUGHES

\*DR. WILLIAM F. JAMES

JOHN K. McCAUSLAND

\*GEORGE T. SMITH

GEORGE M. WILSON

\* Members of the Executive Committee

EXECUTIVE AND HEAD OFFICE Suite 1905 — Seven King Street East  
Toronto, Canada



**I**N this booklet is a summary of the proceedings of the Annual and General Meeting of Northgate Exploration Limited, prepared for the benefit of those shareholders who were unable to be present.

The Meeting convened at 11:00 a.m., June 28, 1966, at the King Edward Sheraton Hotel in Toronto, Canada, with a substantial number of shareholders being present in person or represented by proxy.





At 11:00 a.m., Tuesday, June 28, Patrick J. Hughes, President, convened the Annual and General Meeting of shareholders of Northgate Exploration Limited in the Hunting Room of the King Edward Sheraton Hotel, Toronto. Welcoming shareholders present, the President expressed appreciation for their interest in the affairs of the company, and also gratefully acknowledged the support of those who, being unable to attend, returned their signed proxies.

In speaking to the meeting, Mr. Hughes announced he would only briefly touch upon the company developments of 1965, as these were described in considerable detail in the Annual Report which was sent out to all registered shareholders earlier this month. Commenting on operations of the Tynagh Mine of the company's wholly owned subsidiary, Irish Base Metals Limited, he stated:

"Although we experienced some disappointments and frustrations during the construction program, with two separate fires necessitating the replacement of certain damaged equipment

and a resultant delay, we did achieve our major objective, which was the commencement of commercial-scale production.

"Understandably, owing to the unforeseen delays in the construction program and the related postponement of the commencement of the plant tune-up period, the previously projected forecast of concentrate production for 1966 was necessarily revised.

"You may recall that the original scheduled date for completion of the concentrator complex was August 31, 1963. This was subsequently advanced to October 21st, however, for the reasons stated in the Annual Report, it was not until early December before production in commercial quantities was realized.

"While this delay in commencement did affect the calendar time-table of projected concentrate output, the operating experience was otherwise fairly consistent with pre-production forecasts.



"For instance, our previous forecast of production was based on the treatment of 100,000 tons of ore during a four month tune-up period, and thereafter progressive increases in the treatment rate to a monthly average of 60,000 tons. As noted in the Annual Report, a total of 151,500 tons of ore was processed in the four month period commencing December 1st, which includes 16,124 tons treated latterly in November when operations were on an intermittent basis.

"During the three months of the first quarter of 1966, which was a tune-up period, the plant treated 105,684 tons of ore with a resultant output of 23,060 tons of concentrate. Mine operating profit for this period, with the plant functioning at 58.7% of capacity, was \$1,325,586.

"The revised and current projection of plant operations assumes the treatment of 45,000 tons of ore for each of the months of April, May and June; 50,000 tons monthly for the period from July to September; and an average of 60,000 tons monthly for the final quarter of 1966.

"After making allowance for the delay in the commencement of the tune-up period which naturally affected the cash flow at certain specific dates, the latter forecast when taken on a 12-month basis, represents a reduction of only 80,000 tons from the original projection of the treatment rate.

"As stated in the Annual Report, 42,414 tons of ore were treated during the month of April, and in May a total of 46,850 tons were processed. While there are a few days left in June for which actual production figures are not yet available, indications are that the second quarter objective of 135,000 tons will be realized, and may even be exceeded.

"Similarly, while final figures are naturally not yet available for a precise statement of operations for the second quarter ending June 30th, it is estimated that the mine operating profit for this period will be in the neighborhood of \$1,750,000. The expected cash flow for the period from January 1st to June 30th, inclusive, is estimated at approximately \$2,250,000. This, of course, includes the tune-up



period during which the plant operated at 58.7% of capacity as compared with about 75% for the second quarter.

“The final figures for the second quarter ending June 30th will be detailed in a report that will be forwarded to shareholders toward the end of July or early in August. Regular quarterly reports will be submitted to shareholders commencing with the initial report for the period ending June 30th.

“While the daily average production during May and June was between 1,500 and 1,600 tons, it is noteworthy that operations at, and even in excess of capacity, were achieved on many individual days. The strike of the Electricity Supply Board of Ireland sharply curtailed output in two days during May. Overall recovery of lead for the month of May was 73.9%, and for zinc, it was 69.1%. The latter, incidentally, is the highest zinc recovery achieved to date.

“At the end of May, the excess of current assets over current liabilities totalled \$2,780,000.



Loading concentrates at the mine  
for shipment to Galway.



"It is expected that funds sufficient for full debt retirement will be available during 1967.

"The Annual Report sets out the plans to mine a portion of the secondary oxide ore containing copper during the current year. This is scheduled to be introduced into the circuit during the months of August and September. The decision to mine the copper-bearing oxide ore at this time was to take advantage of currently prevailing high prices for this metal.

"Assuming constant prices for the metals to be recovered, that is: the equivalent of £96 per long ton or US12¢ per pound for both lead and zinc; £440 per long ton or US55¢ per pound for copper; and US\$1.293 per ounce for silver and the planned production from the oxide ore mine operating profit for the second half of the current year is estimated to be in excess of \$5 million or a total of more than \$8,000,000 for the full year.

"This forecast assumes the treatment of 145,000 tons of oxide

ore. Consideration is now being given to the mining of additional oxide ore containing copper during the 1966 fiscal year. In this event, the operating profit figures mentioned, could be substantially higher. As there is considerable fluctuation in metal prices, these forecasts are necessarily subject to revision.

"I am pleased to advise you that at the Annual and General Meeting of Gortdrum Mines Limited held yesterday, shareholders approved the terms of the agreement between Gortdrum Mines Limited and your company, particulars of which were provided in the Information Circular that accompanied the notice of this Meeting. If similarly approved by you today, your company will receive 250,000 shares of Gortdrum Mines Limited, which, together with the shares now held, will bring your company's holdings in Gortdrum to a total of 709,764 shares, making it the largest individual shareholder of that company.

"With Gortdrum Mines Limited scheduled to commence pro-



duction of its copper-silver mine by mid-1967, this holding can be considered a valuable asset for your company.

"With funds now available out of operating revenue, as permitted under the terms of the financing agreement, we have resumed active exploration of your company's extensive holdings of mineral rights secured under Prospecting Licences throughout many Counties of Ireland. In connection with the company's plans for by-product recovery of Barytes, further investigations including pilot plant tests, are proceeding.

"In closing, may I say that while we have experienced the problems that are inherent in most new ore processing plants, we are enthusiastic over the outlook, not only for 1966, but many more years to come.

"May I express my sincere thanks to the shareholders for their continuing support, and gratefully acknowledge the competence of the technical staff and mine employees".



Loading concentrate at the Galway storage and shiploading facility.



At the conclusion of the President's review, a color sound movie on the opening ceremonies of the Tynagh Mine was shown, after which Mr. Murray K. Pickard, the company's General Manager, was called upon to describe the progress of operations at the mine. Mr. Pickard noted that the materials handling problem which had restricted throughput during the tune-up period were being overcome and that full capacity should be reached in the final quarter of 1966. Mine operating costs have been close to those predicted and progressive improvement has been shown in recoveries of both lead and zinc. Recoveries are expected to reach forecast levels as operators become more experienced and operations more stabilized.

Mr. Pickard stated that the mining method adapted for open-pit mining of the 'black mud' ore has proven satisfactory and no undue problems were experienced even during the extreme weather conditions during the winter.

Mr. Hughes invited questions from any of the shareholders present, and after the question period he returned to the

business of the Annual and General Meeting, moving for the approval and adoption of the Annual Report. The report of the Directors, the financial statements and auditors' report were adopted unanimously.

Nominated from the floor and unanimously re-elected for a term of three years were three directors whose terms of office had expired. The directors re-elected were: Dr. Duncan R. Derry, John K. McCausland and George M. Wilson. Gunn, Roberts and Co., Chartered Accountants, were re-appointed auditors of the company.

#### **FURTHER BUSINESS OF THE MEETING**

The President then called for a vote from the shareholders present on the resolution passed by the Directors authorizing the increase of the authorized capital of the company from \$5,000,000 to \$6,000,000 by the creation of an additional 1,000,000 shares with a par value of \$1.00 each. This resolution was unanimously approved by a vote of the shareholders present.





Aerial view of the concentrator complex at Tynagh, County Galway, Ireland.



Shareholders were also asked to consider, and if advisable, to ratify and confirm an agreement dated May 31st, 1966, between the company and Gortdrum Mines Limited. Before putting this resolution to a vote, Mr. Hughes briefly described the pertinent terms of the agreement after first noting that full particulars had previously been provided to the shareholders in the information circular which accompanied the notice of the meeting:

"Gortdrum Mines (Ireland) Limited has arranged to sell at par up to US\$6.5 million principal amount of 8% First Mortgage Bonds to Midland and International Banks Limited of London, England. The funds so received by Gortdrum Mines (Ireland) Limited will enable it to bring its copper-silver ore body in County Tipperary, Ireland, into production on or about July, 1967. It is, however, a term of the sale of these bonds that the payment of the principal and interest thereon be guaranteed by your company and by our wholly owned subsidiary, Irish Base Metals Limited. Accordingly, under the terms of the agreement which you are

being asked to approve today, the company has agreed with Gortdrum Mines Limited to guarantee and to cause Irish Base Metals Limited to guarantee the bonds to be issued by Gortdrum Mines (Ireland) Limited, and also to provide management and technical services to Gortdrum Mines (Ireland) Limited until its mining property is brought into production".

"In consideration of the giving of such guarantees and the provision of the management and technical services, Gortdrum Mines Limited has agreed to issue to the company 250,000 shares of its capital stock, which shares are being acquired by our company for investment purposes only, and, in addition, Gortdrum Mines Limited has agreed to grant to our company an option to purchase an additional 150,000 shares, exercisable at a price of \$4.00 per share on or before December 1st, 1972".

This resolution was unanimously approved on a poll vote. There being no further business for discussion, the meeting was then adjourned.



# IRISH BASE METALS LIMITED—1966

## OFFICERS

|                   |   |   |   |   |   |   |   |   |   |                              |
|-------------------|---|---|---|---|---|---|---|---|---|------------------------------|
| PATRICK J. HUGHES | - | - | - | - | - | - | - | - | - | <i>Chairman of the Board</i> |
| S. P. BOLAND      | - | - | - | - | - | - | - | - | - | <i>Secretary</i>             |
| MURRAY K. PICKARD | - | - | - | - | - | - | - | - | - | <i>General Manager</i>       |

## BOARD OF DIRECTORS

|                 |                  |              |
|-----------------|------------------|--------------|
| G. W. ARMSTRONG | M. GILROY        | G. T. SMITH  |
| W. CASPER       | P. J. HUGHES     | M. TREBUCQ   |
| A. DE JAER      | DR. W. F. JAMES  | G. H. WHITE  |
| DR. D. R. DERRY | J. K. McCAUSLAND | H. S. WHITE  |
| R. E. FASKEN    | J. V. McPARLAND  | G. M. WILSON |

## SUSTITUTE DIRECTORS

|                     |               |                    |               |
|---------------------|---------------|--------------------|---------------|
| DR. B. S. W. BUFFAM | P. HARRINGTON | W. HORSTER         | P. J. LENIHAN |
| MICHAEL MCCARTHY    | M. V. O'BRIEN | A. M. R. SYLVESTER |               |

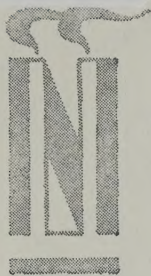
REGISTERED OFFICE 162 Clontarf Road,  
Dublin 3, Ireland

MINE OFFICE Tynagh, County Galway,  
Ireland



Printed in Canada





## NORTHGATE EXPLORATION LIMITED

*Suite 1905, Seven King Street East, Toronto, Canada*

TELEPHONE 362-2781 • CABLE ADDRESS "NORGATE"

## 1966 HIGHLIGHTS

Operating profit before depreciation and amortization was \$6,437,760.

Cash flow, before allowances for depreciation and non-cash write-offs, was \$5,539,514 or the equivalent of \$1.11 per share.

Excluding debt charges, the cash flow would be \$6,549,240 or the equivalent of \$1.32 per share.

Net consolidated income, after all write-offs for depreciation, amortization, debt discount and financing charges, was \$3,783,000, equal to \$0.76 per share.

Redemption of \$2,473,983 (Canadian) principal amount of funded debt six months in advance of mandatory payment date.

An additional cash flow sinking fund payment of \$2,078,829 will be paid on May 1st, 1967, as a result of 1966 operations.

Net increase in ore reserves available for open pit recovery equal to approximately 400,000 tons or the equivalent of about a half year's mill production at capacity.

The treatment of 545,693 tons of ore during 1966 with a resultant concentrate output of 121,564 tons, was at the rate of 78% of capacity.

Forecast of 1967 operations is for the treatment of 700,000 tons of ore and a resultant expected concentrate output of approximately 160,000 tons.

Ore treatment rate in January totalling 61,869 tons for a total average of 2,060 tons and concentrate output of 14,729 tons was the highest monthly average since commencement of operations. Estimated gross value of concentrate produced in January 1967 is \$2,018,000 and net smelter value is \$1,413,000.

Approximate total of metals contained in the concentrates produced in 1966 were as follows:

- 84.1 million pounds of lead
- 48 million pounds of zinc
- 3.5 million pounds of copper
- 1.2 million ounces of silver

The Tynagh Mine is the largest individual silver producer in Europe and the largest individual lead-zinc mine in Western Europe.

Gortdrum Mines Limited, in which Northgate is the largest individual shareholder, holding approximately 20% of the outstanding shares, is scheduled to commence operation of its 1,500 tons per day capacity concentrator near Tipperary, Ireland, mid-1967. Gortdrum Mines will commence production with ore reserves estimated at 4.2 million tons of an average grade of 1.2% copper and 0.75 ounces silver per ton.



